

Please amend the following paragraphs of the specification in the manner indicated:

[0002] The present invention relates to a system for providing users with information in relation to video information, and in particular, to a system for providing users who receive a broadcast signal ~~broadcasted electric wave~~ with information concerning video information included in a the signal ~~broadcasted on the electric wave~~.

[0004] In general, videos to be broadcasted ~~on an electric wave~~ in television broadcasting include a variety of kinds of scenes. Such scenes frequently include appearance of actors and/or actresses who wear fashionable clothes, appearance of special foods dishes, or famous hot-spring resorts.

[0005] Viewers who watch such videos (that is, users who receive the broadcast signal ~~broadcasted electric wave~~) often desire to obtain in ~~detailed~~ information about particular goods included in the videos (for example, clothes or foods dishes).

[0006] However, the viewer who desires to obtain such detailed information encounters difficulties resulting from the limitations of conventional program broadcasting systems. For example, such a viewer is required to make inquiries to a broadcasting station by saying providing the title of the program or other key information.

Alternatively, such a viewer is required to write down

necessary information about particular desired goods during watching the program and, later on, make inquiries to a manufacturer, wholesaler, or others on the basis of the viewer's writing memorandum. ~~To be~~ In short, it is difficult for the viewer to obtain detailed information about particular goods in an easy easier and quick quicker manner.

[0007] Additionally, this drawback results in that the usability of the broadcasting business has been reduced ~~deteriorated~~.

[0008] On the other hand, ~~the~~ conventional program broadcasting systems have long adopted the way use of advertisements, in which the broadcasting station receives payment of advertisement fees from their clients (manufactures or others) for broadcasting commercials of their clients.

[0009] The above program broadcasting systems, however, has ~~a drawback in also has the situation~~ that a viewer cannot obtain information about viewer's desired goods appearing in broadcasted programs. ~~This The result is results in that, as from~~ one point of view, that manufactures or others fail to obtain many opportunities chances to advertise or popularize their products or goods. ~~As From~~ another point of view, in the conventional broadcasting systems, broadcasting enterprises lose opportunities chances to be paid ~~through~~ for providing the aforementioned detailed information about viewer's desired goods appearing in broadcasted programs.

[0010] A first object of the present invention is to provide, with due consideration to the drawbacks of such a conventional system, an information serving system which permits a viewer who watches a broadcasted program to obtain detailed information about a viewer's desired goods or others with ease easiness and without undue delay delays.

[0011] A second object of the present invention is to provide an information serving system that permits a viewer who watches a broadcasted program to obtain detailed information about a viewer's desired goods or others with ease easiness and without undue delay delays, resulting in that chances to advertise or popularize goods or others of which information is desired to be given to viewers can be increased and chances to be paid, as an information serving fee, for servicing such information can also be increased.

[0012] The above objects are also directed to an information serving module included in the information serving system, an information serving method carried out by the information serving module, a broadcast module included in the information serving system, a broadcast method carried out by the broadcast module, a reception module included in the information serving system, a reception method carried out by the reception module.

[0013] In order to attain the first object, as one embodiment, an information serving system according to the present invention comprises: a broadcast module, a

reception module, and an information serving module. The broadcast module has a broadcast unit to broadcast a program information including at least video information. The reception module has a receiver to receive the broadcasted program broadcast information, a selector to select an image component composing an image consisting of the video information included in and integrated with the received program broadcast information, a producing unit to produce specification information indicative of the selected image component, a transmitter to transmit the produced specification information, and a presenting unit to receive incoming component information and present the received component information. The information serving module has an acquiring unit to acquire the incoming specification information, and a transmitter to transmit to the reception module the component information indicative of the image component indicated by the acquired specification information.

[0014] Still, in order to attain the first object, an information serving system according to the present invention preferably provides a first configuration comprising: a broadcast module, such as a broadcasting station module, having broadcast means, realized by for example a CPU, for broadcasting a program broadcast information including at least video information; a reception module, such as a user module, having: reception means, realized by for example a broadcasting interface, for receiving the broadcasted program broadcast information, selection means, by way of example, realized by an operation device, for selecting an image component

composing an image consisting of the video information included in the received broadcast information, production means, such as a selection interface, for producing specification information indicative of the selected image component, transmission means, such as an output interface, for transmitting the produced specification information, and presentation means, such as a display, for receiving incoming component information and presenting the received component information; and an information serving module, realized for example by an advertising company module, having acquisition means, such as an input interface, for acquiring the incoming specification information, and transmission means, such as an output interface, for transmitting to the reception module the component information indicative of the image component indicated by the acquired specification information.

[0016] Preferably, as a second configuration, there is provided an information serving system, wherein the broadcast means included in the broadcast module is configured to include identification information to identify the image component into the broadcast program information and broadcast the program broadcast information with the identification information therein, and the production means included in the reception module is configured to produce, as the specification information, the identification information broadcasted correspondingly to the selected image component. Accordingly, identification information is broadcasted with its inclusion in broadcasted program information. The identification information that broadcasted correspondingly

to an image component selected at the reception module serves as specification information. It is therefore possible that the correspondence between the image component and the specification information can be sustained firmly and transmitted to the information serving module.

[0022] Further, there is provided a broadcast method carried out by the broadcast module included in the information serving system of either of the second or third configuration. The method comprises the step of broadcasting the program ~~broadcast information~~ in which the identification information to identify the image component is included. Thus, broadcast information including the program and identification information is broadcasted, so that the correspondence between the identification information and the component information is maintained firmly, thus information being serviced without fail.

[0045] In the following embodiments, the present invention is applied to an information serving system for serving detailed information about a target to be traded or popularized (or advertised). The target to be marketed ~~traded~~ or popularized is specified with utilization of ~~a~~ ~~an~~ ~~electric wave to be~~ broadcasted signal ~~to broadcast electric wave~~. Thus the detailed information about the specified target is ~~serviced~~ provided to a user who makes use of the broadcasted signal ~~electric wave~~. The target to be marketed ~~traded~~ and popularized, which is once provided to a user as an "image component" through the broadcasted signal ~~electric wave~~, includes a variety of types. Specifically,

the target includes both of a variety of "goods" to be traded or popularized and a variety of "services (actions)" to be marketed traded or popularized, provided the services can be specified. The "goods" include clothes, shoes, home appliances, books, and cars, even buildings, meanwhile the "services" include tours (tour programs), amusements, reservation of hotels, parties, and meetings.

[0049] FIG. 1 is a block diagram outlining the whole configuration of an information serving system according to the first embodiment of the present invention. FIGS. 2 to 4 are diagrams showing detailed configurations of each module that composes comprises the information serving system. FIGS. 5, 6A and 6B are diagrams showing information serving processes carried out in the information serving system. Further FIG. 7 shows a diagram exemplifying an image displayed in the first embodiment.

[0051] As shown in FIG. 1, an information serving system S is composed of an advertising company module AD serving as an information serving module arranged at an advertising company, a broadcasting station module TV serving as a broadcasting module arranged at a broadcasting station, a communication company module TR arranged at a communication company, and a user module RV serving as a receiver module placed at a user's house that receives broadcasted signal an electric wave.

[0052] ~~The whole operation will now be described.~~

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[0053] The foregoing information serving system S provides detailed information about goods to those who use the user module RV from the advertising company module AD placed at an advertising company who are dealing with the goods. In this information serving system S, goods are included as an image component corresponding to part of an image provided by a TV program (hereinafter, simply referred to as "program"). The program is represented by the user module RV that receives a broadcast signal ~~an electric wave~~ transmitted from the broadcasting station module TV, so a user is able to view images represented on the module TV.

[0055] Based on the identifying signal S_{id} , the broadcasting station module TV has accompanying data included into a broadcast signal S_{tv} , then transmits the signal S_{tv} to the user module RV in the form of broadcast signals ~~electric waves~~. The broadcast signal S_{tv} is produced correspondingly to a program, in which the goods shown by the identifying signal S_{id} is included. The accompanying data include specification information to specify an image in which the goods are included (i.e. the goods are displayed as part of the image) and highlight information to highlight the position of the goods in the image and the goods itself.

[0059] ~~Responsibly to this In response~~, the communication company module TR transmits the information request signal S_{rq} , with no change added to this signal, to the broadcasting station module TV via the wired telephone line or the cellular phone connection line. Then the broadcasting station module TV relays the information

request signal S_{rq} to the advertising corporation module AD.

[0063] Referring to FIGS. 2 to 6A and 6B, each module included in the information serving system S according to the first embodiment will now be explained in detail in terms of its operation ~~and operation~~.

[0070] In FIG. 5, for the sake of simplified explanation, processing carried out by both of the operation device 3 and the display 8 and further processing carried out by the information server 1, three of which are contained in the advertising company module AD, are explained separately. Communication between the user module RV and the communication company module TR is made through a wireless telephone line or cellular telephone connection line, both of which will now be explained together.

[0077] More concretely, the accompanying data S_{mt} includes ~~include~~, as the foregoing specification information, the image frame number of an image to be targeted in the program. Further, the display position is, by way of example, designated by information indicative of a period of time measured from the start of the horizontal scanning in the image frame determined by the frame number. The highlight information is for example designated by data of a frame surrounding the goods on an image, information necessary to highlighting the surrounding frame (e.g., by blinking it), or a train of characters to be displayed for showing the outlines of the goods (such as the ~~goods~~ good's name and manufacture). Incidentally, the ~~goods~~ good's

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identifying information will not be displayed within the image of the goods.

[0094] This selection is detailed as follows. One On example is such that the position of a cursor displayed on the display 31, which is movable by the user, is always monitored by the selection interface 27. When goods are selected on the image (for example, the selection can be made with a click of a mouse in charge of movement of the cursor), the selection is reflected in an operation signal S_{ri} outputted by the operation device 30. Thus, based on the operation signal S_{ri} , the selection interface 27 is able to recognize such selection and goods pointed by the cursor position. Alternatively, a laser pointer can make a pointing technique for such selection. Still, other exiting pointing techniques, such as use of frames, may also be used. In the case of using the laser pointer, as the lighting source, a mobile terminal that has the capability of lighting the laser pointer may be adopted (refer to the user module in FIG. 5). Still, a device for detecting an arriving point of a view line from a user can be employed, which enables the detection of goods targeted by the user, thus providing selection of goods.

[0095] In response to the recognition of desired goods being selected, the selection interface 27 acquires goods identifying information indicative of the selected goods from the accompanying data S_{mt} (step S210). The interface 27 then adds, to the acquired goods identifying information, individual identifying information to identify a user who has the user module RV so that the foregoing

information request signal S_{rq} is produced. To be specific, the individual identifying information is for example the telephone number of a user's house and referred as "user ID" in FIG. 5. The information request signal S_{rq} thus produced is then sent to the output interface 28.

[0097] The transmission of the information request signal S_{rq} can be modified into another way. Practically, the goods identifying information obtained by the selection interface 27 is transmitted, as in FIG. 5, to a mobile terminal on the basis of ~~such~~ a short-distance wireless communication technique, such as as what is called Bluetooth (step S211). And the goods identifying information is transmitted from the mobile terminal to the communication company module TR based on the wireless technique.

[0098] The communication company module TR receives the incoming information request signal S_{rq} , and sends it to the broadcasting station module TV through the wired or wireless telephone connection line (step 212). In transmitting the information request signal S_{rq} from the user module RV to the broadcasting station module TV, information, such as the telephone number or Internet address of the broadcasting station module TV, is transmitted from the broadcasting station module TV to the user module RV at predetermined intervals.

[0103] In replay reply to this sending, the output interface 2 gives predetermined output interface processing to the detailed information signal S_{if} , and sends the

processed signal to the communication company module TR via the wired or wireless telephone line (step S215).

[0105] As shown in FIG. 4, the input interface 25 of the user module RV that has received the detailed information signal S_{if} has it displayed on the display 31 (step S217). Therefore, the ~~use~~ user who watches this display 31 is able to acquire both the detailed information in relation to the goods previously selected on the program and reference signal relating to the goods.

[0110] As exemplified in FIG. 6B, one calculation formula ~~way~~ is that a fee obtained by multiplying the number of request times by a constant rate is added to a predetermined basic advertising fee set to a certain amount (refer to "example 1" in FIG. 6B). An alternative calculation formula ~~way~~ is that the advertising fees are pervasively listed in a table at every number of request times, the table being stored in a ~~not-shown~~ memory (not shown) of the advertising fee calculator 7, and the number of request times is referred to the table to obtain an advertising fee (refer to "example 2" in FIG. 6B).

[0136] As shown in FIG. 8, the information servicing system S' is provided with an advertising company module AD' placed in an advertising company, a broadcasting station module TV' placed in a broadcasting station, a communication company module TR, and a user module RV'. The communication company module TR is placed in a communication company, like the first embodiment, and the user module RV' is placed in the home of a user who

receives broadcast signal an electric wave to be
broadcasted.

[0137] ~~The entire operation of the information servicing system S' will now be described.~~

[0138] The information servicing system S' adopts a different servicing way from that in the first embodiment. That is, a user is able to view a program at the user module RV' by receiving a signal an electric wave broadcasted from the broadcasting station module TV'. Detailed information about goods composing a certain image appearing in the program is serviced from the advertising company module AD' that handles the goods to the user who uses the user module RV'.

[0139] To attain this operation, the broadcasting station module TV' produces a broadcast signal S_{tv} including images, like the first embodiment, and sends out this signal S_{tv} as a broadcast signal electric wave. The broadcast signal S_{tv} will reach the user module RV'.

[0140] The user module RV' receives the broadcast signal S_{tv} , and displays images based on the signal S_{tv} on a display (Subsequently later described), concurrently with the output of audio based on the signal S_{tv} through speakers or others. Thus a user is able to view a program.

[0143] The communication company module TR forwards the received information request signal S_{rq} , as it is, to the broadcasting station module TV' via the wired or cellular

telephone connection line. The broadcasting station module TV' relays the received information request signal S_{rq} to the advertising company module AD'.

[0145] The communication company module TR, when receiving the detailed information signal S_{if} , sends out the signal S_{if} , without any processing to the signal S_{if} , to the user module RV' via the wired or cellular telephone connection line.

[0149] The advertising company module AD' is shown in FIG. 9. As shown therein, this module AD' is provided with an information server 1' in which goods information and others are stored, like the information server 1 in the first embodiment. In addition, the module AD' is provided with an output interface_2, operation device 3, input interface 4, search unit 5, payment processor 6, advertising fee calculator 7, and display 8, all of which are formed in the same way as those of the advertising module AD in the first embodiment.

[0154] To make the explanation easier to understand, in FIGS. 12 to 14, the processing at the operation device 3 and display 8 and the processing at the information server 1', both included in the advertising company module AD', will be explained separately. Like the first embodiment, it is assumed that the communication between the user module RV' and communication company module TR be executed via a wired or ~~portable~~ wireless telephone connection line.

[0155] First of all, mainly referring to FIG. 12, a basic information-servicing operation according to the second embodiment will now be described explainer.

[0156] In the basic information-servicing operation, as shown in FIG. 10, the broadcast signal producer 16 of the broadcasting station module TV' produces a broadcast source signal $S_{tv'}$ that includes images necessary to broadcast a program, and sends the signal $S_{tv'}$ to the broadcast interface 15.

[0157] The signal $S_{tv'}$ is subject subjected to predetermined output interface processing by the broadcast interface 15, then sent to the user module RV' as a broadcast signal S_{tv} (FIG. 12, step S301), which corresponds to the conventional broadcast signal.

[0158] The user module RV' receives the broadcast signal S_{tv} which was produced like as the conventional broadcast signal. In the user module RV', as shown in FIG. 11, the broadcast signal S_{tv} is inputted into the broadcast interface 20 to undergo predetermined input interface processing, the resultant signal being sent to the broadcast signal decoder 26.

[0162] This selection is detailed as follows. On One example is such that the position of a cursor displayed on the display 31, which is movable by the user, is always monitored by the selection interface 27' which also accepts the broadcast source signal $S_{tv'}$. When goods are selected on the image (for example, the selection can be made with a

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click of a mouse ~~in charge of~~ controlling movement of the cursor), the selection is reflected in an operation signal S_{ri} outputted by the operation device 30. Thus, based on the operation signal S_{ri} , the selection interface 27' is able to recognize such selection and the goods pointed by the cursor position. Alternatively, a laser pointer can be used as ~~make~~ a pointing technique for such selection. Still, other ~~existing~~ existing pointing techniques, such as use of frames, may also be used. In the case of using the laser pointer, as the lighting source, a mobile terminal that has the capability of lighting the laser pointer may be adopted (refer to the user module in FIG. 12).

[0166] The communication company module TR receives the incoming information request signal S_{rq} , and sends it to the broadcasting station module TV' through the wired or wireless telephone connection line (step 304).

[0170] The information server 1' specifies goods corresponding to the goods specifying information (step S305), extracts goods identifying information indicating the specified goods (step S306), and uses the goods identifying information to search the information server 1' and to acquire necessary detailed information from the information server 1' (step S307). Further, the information server 1' acquires goods reference information concerning the goods, which should be referred with the detailed information and others, and temporarily stores the acquired information therein (step S308). Then, a detailed information signal S_{if} including the detailed information

is produced in the information server 1' and sent to the output interface 2.

[0171] In ~~replay~~ reply to this sending, the output interface 2 gives predetermined output interface processing to the detailed information signal S_{if} , and sends its processed signal to the communication company module via the wired or wireless telephone connection line (step S309).

[0172] The communication company module TR accepts the incoming detailed information signal S_{if} , then transmitting it to the user module RV' through the wired and wireless telephone connection line (step S309).

[0173] As shown in FIG. 11, the input interface 25 of the user module RV' that has received the detailed information signal S_{if} has it displayed on the display 31 (FIG. 12, step S311). Therefore, the ~~use~~ user who watches this display 31 is able to acquire both the detailed information in relation to the goods previously selected on the program and reference signal relating to the goods.

[0175] On the other hand, in the advertising company module AD', the advertising fee calculator 7 uses the search signal S_{sh} to calculates an advertising fee that corresponds to the detailed information supplied in the similar manner to that in the first embodiment. The calculator 7 provides the display 8 with the fee in the form of a calculation signal S_{cl} so that the amount of the fee is displayed and notified (step_S314). The calculation

signal S_{cl} is also provided to both of the output interface 2 and the payment processor 6.

[0178] In the advertising company module AD', the payment processor 6 executes the processing to pay the broadcasting station the advertising fee indicated by the calculation signal S_{cl} . The processor 6 produces a processing result signal S_{op} that shows a result of the processing, and then sends it to the output interface 2.

[0184] In the advertising company module AD', the input interface 4 which has received the information request signal S_{rq} makes the signal S_{rq} ~~experience undergo~~ predetermined input interface processing, as shown in FIG. 9, and sends the processed signal to the search unit 5.

[0188] In ~~replay reply~~ to this display, when the detailed information and others are newly inputted through the operation device (step S408), and the inputted detailed information and others are loaded into the information server 1' (step S409). Further, in the information server 1', goods identifying information indicative of goods specified by the recorded detailed information is created and stored (step S410). Still further, goods reference information which should be referred together with the detailed information and others and which relates to the goods is stored in the information server 1' (step S411). And a detailed information signal S_{if} including the detailed information and others is produced, and sent to the output interface 2.

[0189] In ~~replay reply~~ to this sending the detailed information signal S_{if}, the output interface 2 gives predetermined output interface processing to the detailed information signal S_{if}, and sends it to the communication company module TR via the wired or wireless telephone connection line (step S412).

[0190] The communication company module TR accepts the incoming detailed information signal S_{if}, before transmitting it to the user module RV' through the wired and wireless telephone connection line (step S412).

[0191] As shown in FIG. 11, the input interface 25 of the user module RV' that has received the detailed information signal S_{if} has it displayed on the display 31 (FIG. 12, step S414). Therefore, the ~~use~~ user who watches this display 31 is able to acquire both of the detailed information in relation to the goods previously selected in the program and the reference signal relating to the goods.

[0201] In ~~replay reply~~ to this sending, the output interface 2 gives predetermined output interface processing to the detailed information signal S_{if}, then sends it to the communication company module TR via the wired or wireless telephone line (step S506).

[0202] The communication company module TR accepts the incoming detailed information signal S_{if}, before transmitting it to the user module RV' through the wired and wireless telephone connection line (step S506).

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[0203] As shown in FIG. 11, the input interface 25 of the user module RV' that has received the detailed information signal S_{if} has it displayed on the display 31 (FIG. 14, step S508). Therefore, the ~~use~~ user who watches this display 31 is able to know that both of the detailed information in relation to the goods previously selected in the program and the reference signal relating to the goods cannot be acquired.